

164 in their *Voyage en Abyssinie*:

"vers la fin de la saison des pluies, l'atmosphère humide, la terre détrempée et féconde en miasme pernicieux, font du pays un séjour funeste . . ." (Tigre and Lake Tsana).

(Toward the end of the rainy season, the humid atmosphere and the soil, which is soaked and productive of a pernicious miasma, turn the country into a fatal region.)

Blanc (1869) states that Massawa is almost uninhabitable because of malaria, and that this is true, too, of the narrow, densely wooded and damp river valleys in the interior of the country. He gives the Takazze Valley a particularly bad reputation. It was known before the arrival of the Italians that most places below an elevation of 6,000 feet, especially river valleys, were likely to be malarious.

164 The Italians were primarily interested
742 in settling a large group of small farmers in Ethiopia. It was, therefore, of paramount interest to them to find places where malaria would not interfere with agricultural development. A number of surveys were undertaken by first rate Italian malariologists beginning with the investigation by Lega, Raffaele and Canalis in 1936, which covered the Asmara-Addis Ababa road, the railway line from Addis Ababa to Diredawa, and parts of Italian Somaliland. In the following years intensive malarial surveys were made. Through the Malaria Institute "E. Marchiafava" in Rome, research centers were set up in Agordat and Diredawa. Much of the work was carried out under the leadership of Corradetti, who personally covered large parts of northern and northeastern Ethiopia. The British malariologist, Bagster Wilson, has recently published the results of his experiences in Ethiopia.

164 Summing up, it may be said that below 3,000 feet, near permanent collections of water, malaria is endemic. It becomes epidemic during the rainy seasons: the "big" rains from July to October, and the "small" rains in February and March. In the semi-

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164 the country at the moment. It should, however, be kept in mind, that with the opening of communication lines and increased traffic and travel, leprosy must be controlled, otherwise it will increase.

Typhus Fever

Typhus fever is known to occur in at least three forms. Classical louse-borne typhus is endemic on the high plateau. Major Ecke of the American Typhus Commission visited Ethiopia in 1944 and found that, while the occurrence of murine typhus has not been scientifically proved, it is extremely likely that this form plays an important rôle. Recently a number of cases of tick typhus have been reported from southern Ethiopia.

164 The Central Laboratory in Addis Ababa has isolated four local strains of rickettsia.
● 742 One of these has been constantly orchitic for 52 passages through guinea-pigs, while the other three were non-orchitic.

164 Cases fall clinically in two main groups. One has a fulminant course with a very high mortality; the other is extremely mild. The high mortality among Italian laborers in the early days of the occupation (sometimes reaching 20 percent) was no doubt due to louse-borne typhus. Fatality in hospitals in Addis Ababa ranged from five to thirty-five percent. Typhus occurs in Ethiopia in the cold, wet months of July, August and September. Surveys have shown that lousiness is almost universal.

751 During the Italian occupation a large scale vaccination campaign with Weigl vaccine was undertaken. This vaccine has recently been replaced by American vaccine, and large scale vaccination has been carried out since 1945.

Relapsing Fever

164 In 1868, relapsing fever broke out in India and Hirsch (1886) states that it may have been introduced by Napier's soldiers returning from Ethiopia. The disease is no doubt old in Africa, where it occurs in both louse-borne and tick-borne forms.

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